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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/729,112	12/05/2003	Dapeng Wang	2269-3579.2US (98-0062.02)	3169
24247	7590	11/15/2005	EXAMINER	
TRASK BRITT P.O. BOX 2550 SALT LAKE CITY, UT 84110			ROSE, ROBERT A	
			ART UNIT	PAPER NUMBER
			3723	

DATE MAILED: 11/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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<b>Office Action Summary</b>	<b>Application No.</b> 10/729,112	<b>Applicant(s)</b> WANG, DAPENG	
	<b>Examiner</b> Robert Rose	<b>Art Unit</b> 3723	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 24 August 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-25 and 27-33 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 27-32 is/are allowed.
- 6) ☒ Claim(s) 1-6,9,14-18,21 and 33 is/are rejected.
- 7) ☒ Claim(s) 7,8,10-13,19,20 and 22-25 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>08/24/05</u> . | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

1. Receipt is acknowledged of Applicant's Prior Art Statement, filed August 24, 2005.
2. Claim 26 has been canceled.
3. Claim 33 has been added.
4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-3, 6, 9, 14-15, 18, 21, and 33 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Breivogel et al. Breivogel et al disclose a cmp apparatus and method of polishing, comprising all of the subject matter set forth in Applicant's claims above. Note polishing pad(23); deformable pad(22)(20) having isolated solid supports(22); and ventral layer(20). The pad would inherently be expected to exhibit physical properties which vary with lateral distance across the pad, since the pad is not uniform throughout. For instance, resistance to a shear force would be expected to vary depending upon whether measurement is taken at a location above a solid region or above a void, as measurements are taken across the pad.
6. Claims 1, 3-6, 9, 14-18, 21, and 33 are rejected under 35 U.S.C. 102(a) as being anticipated by Eppert Jr. et al. Note figures 1-2 of Eppert Jr. et al which show a deformable layer comprised of a plurality of solid supports and an integral dorsal or

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ventral layer, corresponding to that shown in the embodiments of Applicant's figures 8 and 10. Note the use of a cushioning pad between the solid supports and the lower surface of the polishing pad. The pad of Eppert Jr. et al would inherently be expected to exhibit physical properties which vary with lateral distance across the pad, since the pad is not uniform throughout. For instance, resistance to a shear force would be expected to vary depending upon whether measurement is taken at a location above a solid region or above a void, as measurements are taken across the pad.

7. Claims 1-2, 9, 14, 21, and 33 are rejected under 35 U.S.C. 102(a) as being clearly anticipated by Tolles et al(US 6217426). Tolles et al discloses a CMP apparatus and method of polishing comprising all of the subject matter set forth in applicant's claims above. The pad of Tolles et al would inherently be expected to exhibit physical properties which vary with lateral distance across the pad, since the pad is not uniform throughout. For instance, resistance to a shear force would be expected to vary depending upon whether measurement is taken at a location above a solid region or above a void, as measurements are taken across the pad.

8. Claims 7-8, 10-13, 19-20, and 22-25 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

9. Claims 27-32 are allowed.

10. Applicant's arguments filed August 24, 2005 have been fully considered but they are not persuasive. Applicant's new limitation in the independent claims, of the pad exhibiting a physical property that varies across the deformable pad...parallel to the

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polishing surface, is deemed to be met by the art of record, for reasons set forth above.

With regard to Applicants argument that the solid supports in Breivogel et al are not deformable, but are disclosed as rigid, the degree of deformability is not specified in the claim, and even supports comprised of an epoxy composition are subject to some degree of deformation. Moreover, Eppert, Jr. et al clearly shows a deformable pad(3) made up of solid supports, with integral ventral(fig.1), or dorsal(fig.2) layers, which are described as "semi-rigid", and which are located between the polishing pad and platen. Tolles et al also discloses deformable protrusions(60), which form a layer of solid supports which underlie the polishing pad(44).

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

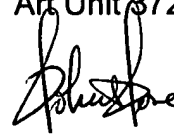
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

11. Any inquiry concerning this communication should be directed to Robert Rose at telephone number (571) 272-4494.

Rr

November 09, 2005

Robert Rose  
Primary Examiner  
Art Unit 3723

A handwritten signature in black ink, appearing to read "Robert Rose", is written over the printed name and title.